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EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 10284056
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APPLICATION DATE : 01-04-97
APPLICATION NUMBER : 09083154

APPLICANT : SEIKO INSTR INC;

INVENTOR : TAWARA KENSUKE;

INT.CL. : H01M 4/02 C01B 31/04 H01M 4/58 H01M 10/40

TITLE : NONAQUEOUS ELECTROLYTE SECONDARY BATTERY

ABSTRACT : PROBLEM TO BE SOLVED: To provide a nonaqueous electrolyte secondary battery which has high energy density, is excellent in cycle characteristic and is reduced in side reaction generated when the battery is preserved and used.

SOLUTION: In a nonaqueous electrolyte secondary battery provided with a positive electrode, a negative electrode and lithium ion conductive nonaqueous electrolyte, at least one of either one of the positive electrode or the negative electrode contains a carbonaceous material together with an electrode active material, and natural scale shaped graphite or expanded graphite which is 5 to 50 m²/g in specific surface area (BET method), a range of 1 to 50 μ m in the average grain diameter, 0.333 to 0.340 nm in spacing (d) (002) in X-ray diffraction, and 40 to 500 nm in a c-axis direction (Lc) in the size of crystal lattice and 40 to 500 nm in an a-axis direction (La) is used as the carbonaceous material.

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